

Title (en)

CARBON NANOTUBE-COATED ELECTRIC WIRE

Title (de)

KOHLENSTOFFNANORÖHRCHEN-BESCHICHTETER ELEKTRISCHER DRAHT

Title (fr)

FIL ÉLECTRIQUE EN NANOTUBES DE CARBONE REVÊTU

Publication

**EP 3703082 A1 20200902 (EN)**

Application

**EP 18871407 A 20181026**

Priority

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- JP 2018039968 W 20181026

Abstract (en)

The present invention relates to a coated carbon nanotube electric wire that has excellent electroconductivity that is comparable to a wire made of copper, aluminum, or the like, realizes excellent voltage endurance, and can further realize weight reduction. A coated carbon nanotube electric wire (1) includes: a carbon nanotube wire (10) including one or more carbon nanotube aggregates (11) configured of a plurality of carbon nanotubes (11a); and an insulating coating layer (21) coating the carbon nanotube wire, a proportion of a sectional area of the insulating coating layer (21) in a radial direction with respect to a sectional area of the carbon nanotube wire (10) in the radial direction is greater than 1.5, the sectional area of the carbon nanotube wire (10) in the radial direction is equal to or greater than  $0.031\text{ mm}^2$ , and the sectional area of the insulating coating layer (21) in the radial direction is equal to or greater than  $0.049\text{ mm}^2$ .

IPC 8 full level

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